Problem L
Working Plan
Time Limit: 2 Seconds

ICPC manager plans a new project which is to be carried out for n days. In this project, m persons numbered from 1 to m are supposed to work. Each day j $(1 \le j \le n)$ requires d_j persons, and each person i $(1 \le i \le m)$ wants to work w_i days.

To increase the efficiency in performing the project, the following two conditions should be satisfied:
(1) each person works for only consecutive w days when he/she works, and
(2) each person can work again after he/she has a rest for at least h days.

ICPC manager wants to find a working plan to assign the working days for all persons such that the number of working days of each person i $(1 \le i \le m)$ is equal to w_i and the number of persons who work for each day j $(1 \le j \le n)$ is equal to d_j, and above two conditions are also satisfied.

For example, assume the project is carried out for $n = 9$ days, and $m = 4$ persons participate in the project. Let $w = 2$ and $h = 1$. Also, assume $(w_1, w_2, w_3, w_4) = (4, 4, 6, 2)$ and $(d_1, d_2, d_3, d_4, d_5, d_6, d_7, d_8, d_9) = (1, 3, 2, 1, 2, 1, 1, 3, 2)$. The table below shows a feasible solution where the i-th row corresponds to person i, and the j-th column corresponds to day j. If person i works or has a rest in day j, the value of the table element with row i and column j is 1 or 0, respectively.

		Day								
		1	2	3	4	5	6	7	8	9
Person	1	1	1	0	0	0	0	0	1	1
	2	0	1	1	0	0	0	1	1	0
	3	0	1	1	0	1	1	0	1	1
	4	0	0	0	1	1	0	0	0	0

Given m, n, w, h, w_i $(1 \le i \le m)$ which is a multiple of w, and d_j $(1 \le j \le n)$, write a program to find a feasible solution as a working plan.

Input
Your program is to read from standard input. The input starts with a line containing four integers, m, n, w, h $(1 \le m \le 2{,}000,\ 1 \le n \le 2{,}000,\ 1 \le w, h \le n)$. The following line contains m integers where the i-th $(1 \le i \le m)$ integer represents w_i $(1 \le w_i \le n)$ which is a multiple of w. The next line contains n integers where the j-th $(1 \le j \le n)$ integer represents d_j $(0 \le d_j \le m)$.

Output
Your program is to write to standard output. If there is a feasible working plan, print `1` in the first line followed by m lines, each i-th $(1 \le i \le m)$ line should contain w_i/w integers. These integers form an increasing sequence of first days that person i works in the feasible plan. If there is no feasible working plan, print only `-1` in the first line. The first sample below corresponds to the example given in the table above.